

ABSTRACT OF THE DISCLOSURE

In a torque sensor having a magnetic metal film with magnetic anisotropy attached to a torque transmission shaft, and an exciting coil and a pair of detector coils each installed near the magnetic metal film, outputs of the detector coils and a
5 reference signal are respectively added in waveform adders when the exciting coil is energized by an exciting power source. Then, the outputs of the adders and the reference signal are respectively compared in phase in phase comparators, and the outputs of the comparators are respectively converted in voltage values. A differential amplifier amplifies a difference between the voltage values, and a torque detector
10 detects direction and magnitude of the torque applied to the torque transmission shaft from polarity and magnitude of the difference voltage value, thereby enabling to accurately detect applied torque even when installed near noise-producing electrical equipment such as an electric power steering system.